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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,739	08/21/2003	Bernd Gigas	87335.3820	6205

7590 07/18/2006

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EXAMINER

DRODGE, JOSEPH W

ART UNIT PAPER NUMBER

1723

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/644,739	Applicant(s) GIGAS ET AL.	
	Examiner Joseph W. Drodge	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-4,6-19 and 22-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 2-4,6-19 and 22-25 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The drawing received on 24 May 2006 is deemed acceptable.

Claims 2-4,6-19 and 22-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Instant Specification, as originally filed and Drawings do not support any of the following features of the newly added recitations in claims 7 and 25: of an adjustable lip that is connected to a partition or weir member that extends downwardly from the settler compartment (recited "third partition) as in amended claim 7, of such adjustable lip extending into a second weir (separate from the 1st weir having the partition and lip) as in amended claims 7 and 25), of a partition wall having a hingedly connected lip as being between the two weirs as in amended claim 25 or as the partition and adjustable lip as being positioned so that there is flow over such lip and into the 2nd of two weirs. The amendments to claims 7 and 25 thus constitute ***New Matter. Paragraph 32 of the Instant Specification and associated figure 2, at best, support claiming of an adjustable lip that is hingedly connected to one of the partitions that extend upwardly from the settler bottom and positioned so that fluid flowing over the top of the partition flows over said lip towards a back wall of the settler compartment (for claim 7) or towards a back wall of the compartment means (for claim 25) .***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch patent 4,333,835 in view of Wolde-Michael patent 4,422,931 and Irion patent

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3,216,573. Lynch discloses the following: settler compartment 12 having top section adjacent top wall 14/16/20 and bottom section 52/56/58 adjacent a bottom wall, coalescing compartment means 32,68,70,125,160 , 1st weir means 130,131,170 (column 8, lines 23-30 and column 9, lines 65-69) and inlet openings 62 therefor, 2nd weir means having upwardly extending 1st and 2nd partitions 60 and 44 and downwardly extending 3rd partition 42 and labyrinth means 100 or 104,145 therefor, and an adjustable lip means 110,144,178 coupled to the 2nd partition.

With respect to independent claim 25, Lynch discloses the following: compartment means for coalescing, 1st weir means and inlet opening means therefor, 2nd weir means and labyrinth means therefor, an adjustable lip means coupled to the labyrinth means, ***lip means 110 at the upper edge of upwardly extending partition 44..***

Lynch also discloses the following for dependent claims: for claim 22, a means for upwardly directing portion of fluid into 1st weir means 173 (column 10, lines 12-17), for claim 23, a means for directing portion of entrained organic phase away from 2nd weir (secondary coalescing screen media 100, column 6, lines 34-49), and for claim 24, means for varying location of the inlet opening and of the entire apparatus (figure 8 shows the entire apparatus being mountable on a wheeled platform to be made portable (column 7, lines 1-9).

The claims differ in requiring the lip to be oriented at a downwardly extending angle and to be hingedly connected to the top edge of the partition weir (Lynch is silent as to how the adjustable lip 110 is connected to top edge of partition or weir 44,100).

Wolde-Michael teach an arrangement of partitions or baffles including upwardly extending partition 74 to which is attached downwardly angled lip 76 (column 5, line 52-column 6, line 32). It would have been obvious to one of ordinary skill in the art to have modified the arrangement of the lip 110 of Lynch, by making it downwardly angled, as in Wolde-Micheal, to create a flow pattern that facilitates separation of the remaining entrained phase in the flow flowing towards the back wall of Lynch.

Wolde-Michael facilitates gravity separation of fluid phases by introducing aeration bubbles (bottom of Abstract). Irion teaches a gravity separation of fluid phases by introducing aeration in which flow between two weirs is directed by an upwardly extending baffle or partition 9 that has an angled, hinged lip attached to its upper edge (figures 2 and 3 and column 4, lines 14-28). It would have been further obvious to have mounted the adjustable lip of the Lynch system modified by Wolde-Michael, in a pivotable arrangement, as taught by Irion, since such construction readily allows adjustable control of the flow rate of fluid past the baffle/partition arrangement, so as to adjust flow rates depending upon changing characteristics of the fluid mixture being treated (see column 1, lines 56-63 of Irion for such express motivation).

Claims 2-4,6-8 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch patent 4,333,835 in view of Johnson patent 6,019,898, Wolde-Michael patent 4,422,931 and Irion patent 3,216,573. With respect to independent claim 7, Lynch discloses the following: settler compartment 12 having top section adjacent top wall 14/16/20 and bottom section 52/56/58 adjacent a bottom wall, 1st weir 130,131,170 (column 8, lines 23-30 and column 9, lines 65-69) and inlet openings 62

therefor, 2nd weir having upwardly extending 1st and 2nd partitions 60 and 44 and downwardly extending 3rd partition 42 and labyrinth means 100 or 104,145 therefor, and an adjustable lip means 110,144,178 coupled to the 2nd partition.

Claim 7 and claims dependent therefrom differ from Lynch in requiring the adjustable weir lip coupling to be rotatably coupled to the 2nd partition, the weir lip of Lynch merely being vertically adjustable. However, Johnson teaches a rotatably coupled and rotating or pivoting weir lip coupled to a partition comprising the lower section of a separating weir (rotatable lip 27 coupled to partition 15a extending above weir plate 19/23, column 5, lines 46-52 and column 2, lines 29-39). Thence, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the Lynch system by substituting the rotatably coupled weir lip edge of Johnson for the slidably adjustable weir lip of Lynch, so as to facilitate accurate adjustment of the height of the weir overflow, to accommodate changes in liquid level in the settler chamber.

The claims also differ in requiring the lip to be oriented at a downwardly extending angle and to be hingedly connected to the top edge of the partition weir (Lynch is silent as to how the adjustable lip 110 is connected to top edge of partition or weir 44,100). Wolde-Michael teach an arrangement of partitions or baffles including upwardly extending partition 74 to which is attached downwardly angled lip 76 (column 5, line 52-column 6, line 32). It would have been obvious to one of ordinary skill in the art to have modified the arrangement of the lip 110 of Lynch, by making it downwardly

angled, as in Wolde-Micheal, to create a flow pattern that facilitates separation of the remaining entrained phase in the flow flowing towards the back wall of Lynch.

Wolde-Michael facilitates gravity separation of fluid phases by introducing aeration bubbles (bottom of Abstract). Irion teaches a gravity separation of fluid phases by introducing aeration in which flow between two weirs is directed by an upwardly extending baffle or partition 9 that has an angled, hinged lip attached to its upper edge (figures 2 and 3 and column 4, lines 14-28). It would have been further obvious to have mounted the adjustable lip of the Lynch system modified by Wolde-Michael, in a pivotable arrangement, as taught by Irion, since such construction readily allows adjustable control of the flow rate of fluid past the baffle/partition arrangement, so as to adjust flow rates depending upon changing characteristics of the fluid mixture being treated (see column 1, lines 56-63 of Irion for such express motivation).

Lynch also discloses the following with respect to dependent claims: for claim 2, the 1st weir is associated with collection of organic material or oil (column 8, lines 23-30) and 2nd weir is associated with collection of clarified water (column 8, lines 61-68); for claims 3 and 6, inlet opening and other portions of both 1st and 2nd weirs being above sludge-type organic phase/water interfaces in filtering or coalescing material 68 below the openings; for claim 4, a portion of 1st weir being vertically adjustable (column 9, lines 65-67), also the location of entire settler compartment and all components therein is adjustable since the settler compartment can be moved by positioning it on a trailer or platform that is portable by use of wheels (see figure); for claim 8, a protruding lip 60 or

132 from front wall of 1st weir for purposes of supporting the weir, for claims 18 and 20 riser with top drain/outlet 66,62,64, and for claim 19, sump section 56 or 58 .

For claims 14-16, Lynch teaches 1st weir front walls to be attached at about a 90 degree angle to the side wall of the settler compartment.

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch in view of Johnson, Wolde-Michael patent 4,422,931 and Irion patent 3,216,573 as applied to claim 7 above, and further in view of Stonner et al patent 3,820,954. Claims 9-12 differ from Lynch in requiring the 1st weir to have a bottom wall and such wall to be angled towards the bottom rear side of the settler compartment. Stonner teaches an oil/water settler and separator having such weirs with bottom walls that slope towards the back thereof (column 4, lines 21-32). It would have been further obvious to have added such sloping bottom wall taught by Stonner et al to the 1st weir of Lynch, in order to facilitate a greater separation of the liquid phases into distinct layers (see Stonner at column 2, lines 53-59). Regarding claims 10-12 of this group of claims, Lynch also teaches protruding lip 132 extending downwardly from coalescing compartment and 1st weir towards the settler bottom to support these structures, while Stonner et al teach the inclined plate of weir front wall of claims 11 and 12.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lynch in view of Johnson, Wolde-Michael patent 4,422,931 and Irion patent 3,216,573 as applied to claim 7 above, and further in view of Casner et al patent 2,817,440.

Claim 13 differs from Lynch in requiring the sides of the 1st weir to be angled or unequally spaced from the back side of the settler compartment. Casner et al teach

such angling of weir wall sides (column 3, lines 3-23, especially lines 11-13, with sides and bottom angled towards one side of settler compartment in order to facilitate flow of heavy impurities towards discharge outlets on the side of the settler compartment (Casner at column 4, lines 55-59).

Applicant's arguments with respect to claims 2-4, 6-19 and 22-25 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

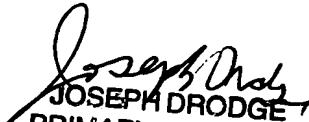
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at 571-272-1151. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

June 30, 2006


JOSEPH DRODGE
PRIMARY EXAMINER